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ABSTRACT

When the Supreme Court struck down a Louisiana law that required public schools to give "equal time" to "creation science," an apparent contradiction was created because groups that traditionally supported the defense of civil liberties in general and freedom of expression in particular seemed to support a position designed to limit rather than expand the free flow of information. To look at this contradiction it is necessary to further understand the concept, "creation science." There are two types of literature in "creation science": (1) the type that attacks and criticizes the concept of evolution, and which misstates scientific principle or fact; and (2) the type that presents the principles of "creation science" and its two basic principles--that the universe is 6,000 years old and that there was the sudden appearance of species. A review of this literature and an understanding of the nature of the scriptures provide the foundation for dealing with the apparent inconsistency of supporting both freedom of expression and the decision of the courts finding the Louisiana (and Arkansas) equal time law unconstitutional. While the stated purpose of the legislation was to promote academic freedom by offering a greater diversity of views and information, the reality behind the legislation was quite different. The equal time concept is nothing more than an attempt to suppress the teaching of evolution or at least to advocate the teaching of a sectarian religious dogma also. (One figure and 18 notes are included.) (MS)

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Equal Time for "Creation Science": A Freedom of Communication Issue?

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In 1980 the Louisiana State Legislature considered and passed a bill whose stated purpose was to promote academic freedom by requiring that "equal time" be given in public school science classes to both evolution theory and "creation science." The act did not require that either topic be taught but did require that both be taught if either one was presented. Don Aguillard and a group of Louisiana parents, teachers, and religious leaders immediately filed suit in Federal District Court asking for an injunction to prevent the enforcement of the law and a declaratory judgment that the law was an unconstitutional violation of the religious establishment clause of the First Amendment. The Court granted this request, and appeals of that judgment eventually were considered by the Supreme Court of the United States in Edwards, Governor of Louisiana, et al. v. Aguillard et al.[1]

Supporting Don Aguillard in his suit and the subsequent appeals were a number of groups and organizations that traditionally support the defense of civil liberties in general and freedom of expression in particular. However, in this case they seemed to be supporting a position designed to limit rather than expand the free flow of information. These groups greeted the eventual decisive decision by the Supreme Court of the United States with great satisfaction. A victory had been won, but was it not a victory for suppression? Why then the satisfaction?

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The purpose of this paper is to examine this apparent contradiction. In order to do so the literature of "creation science" will be reviewed and the origins of "creation science" will be explored. Finally these elements will be compared with the concept of evolution as both a scientific theory and fact. From this study conclusions will be drawn regarding the apparent support for suppression by civil libertarians.

I

The first question is what is "creation science"--the subject for which the "equal time" demand was made in the name of promoting academic freedom? Stated bluntly, is there any valid scientific body of knowledge that can be given the label "creation science?" To answer this question a substantial body of literature must be examined. Fortunately, this literature can be divided into two basic types. The first type centers on attacks and criticism of the concept of evolution. A fundamental characteristic of this literature is the misstatement of a scientific principle or fact or, more often, a totally false assertion or argument. A classic illustration is the assertion that evolution could not have taken place because the fossil record contains no intermediate forms, that is forms that contain characteristics of two known species.[2] The simple fact is that the fossil record is full of such forms, the most dramatic of which are certainly Archaeopteryx and the horse sequence. Another illustration is the claim that the second law of thermodynamics is a physical barrier that prevents the development of more complex forms from simpler forms.[3] This principle which applies only to closed energy systems has no relevance to the processes of evolution which takes place in an open system. Much is also made of disagreements within the scientific community, and these disagreements are cited to discredit

evolution[4] even though none of these disagreements call into question the evolutionary concept of speciation. The disagreements relate to our developing understanding of the mechanisms of evolution. Comments in this area demonstrate another distressing quality of "creation science"--a misuse of evidence that can only be described as deliberate. Evidence is misrepresented, and statements are quoted out of context; and these activities continue even after the misrepresentations have been fully exposed. "Creation science" today is still talking about the lack of intermediate forms and the second law of thermodynamics.

The second much smaller body of material is that which presents the principles of "creation science." While a lot of this material is fluid and shifting, there seem to be two basic principles. The first is that the universe is about 6,000 years old. A correlary to this principle is that all fossils and sedimentation that exist are the result of the Noachian flood.[5] The second principle is that of the sudden appearance of species that had not existed before their appearance. The correlary to this principle is that new species do not arise through evolutionary descent from different earlier existing species.

In order to evaluate these principles it is necessary to look at the evidence used to support them. Regarding the age of the earth Henry Morris, one of the most widely recognized "creation science" authorities, has said, "The only way we can determine the true age of the earth is for God to tell us what it is. And since he has told us, very plainly, in the Holy Scripture that it is several thousand years in age, and no more, that ought to settle all basic questions of terrestrial chronology."[6] All physical measures of the earth's age used in a large variety of scientific disciplines are rejected out of hand. This "young earth" principle creates real difficulty

for the Noachian flood correlary in that there is simply not sufficient time for sedimentation and the layered accumulation of fossils that scientists observe.

The problem with the principle of sudden appearance is that those who advance the principle are unwilling or unable to explain how it works. When asked to explain the mechanism of sudden appearance the "creation scientists" are silent. Occasionally an explanation is offered such as that given by Duane Gish, another recognized leader of the "creation science" movement, in Acts and Facts published by the Institute for Creation Research in December 1978.[7] It is not surprising that the Gish explanation is virtually identical to that found in Genesis 1. Thus in regard to both of the basic principles of "creation science" it is clear that the supporting evidence is an appeal to authority, a religious authority, the Bible. The only possible conclusion that can be drawn is that "creation science" is a religious doctrine rather than a scientific one. That point was well stated by Judge William R. Overton in his decision on an Arkansas "creation science" law in January 1982:

> The creationists' methods do not take data, weigh it against the opposing scientific data, and thereafter reach the conclusions. . . . Instead, they take the literal wording of the Book of Genesis and try to find scientific support for it.
>
> . . . . . .
>
> The proof in support of creation science consisted almost entirely of efforts to discredit the theory of evolution through a rehash of data and theories that have been before the scientific community for decades.

The arguments asserted by creationists are not based on new scientific evidence.[8]

In sum the problem of giving equal time to "scientific creationism" rests on the simple fact that there is no such science to teach. The sum and substance of "creation science" is religious doctrine. The equal time laws would force science teachers either to teach religion or to avoid teaching the scientific facts of evolution.

II

A

The foregoing analysis of "creation science" presents a puzzling question. If they are sincere and dedicated Christians, why do members of the "creation science" movement lie? The Ninth Commandment says "Thou shalt not bear false witness. . ." (Exodus 20:16), and yet as has been shown, "creation science" is built on a foundation of falsehoods. Since even disproven claims and demonstrated errors are commonly repeated in the literature of "creation science," the hypothesis that those involved in the movement are merely poor scientists cannot be supported. Clearly there is another and non-scientific problem involved, and that problem is not a lack of scientific knowledge and understanding. Rather the problem lies in a lack of understanding of the nature of holy scripture--a topic that commands the attention of communication scholars.

A good place to begin this analysis is with the work of the most important communication scholar of our time, Kenneth Burke. His book The Rhetoric of Religion offers an analysis of scripture coherent with modern main-stream Biblical scholarship.[9] His analysis flows out of a provocative observation about the relationship between devout orthodox Jews and their

God. Most of us are probably aware that many such people will not even use the word "God". The Gospel writer Matthew is a good example. God is so far above us and beyond our comprehension that, for these people who produced most of our Bible, God is literally the unspeakable. The question thus becomes how does man speak about the unspeakable? When the question is presented in this way, Burke's answer is the inevitable one. Man uses an incredible array of imaginative and figurative language to communicate in such a situation. Our own experience confirms that Burke is correct. When we experience something unusual, remarkable, or new, how do we communicate that experience to others who have not shared it with us. We say, "It was like. . ." or "I felt as though. . ." or other statements such as these. In other words our effort to communicate immediately drives us to the use of metaphor, simile, and other figurative language. In this respect the writers of scripture were no different than we in their attempts to communicate their experiences and revelations regarding the unspeakable that is God.[10]

For centuries the body of Christianity and the Jewish community have recognized the great variety of materials that make up our holy scripture. There are myths. There are allegories. There is poetry. There are wise sayings. There are attempts to address particular problems at particular points in time and place. And there is history. About the only thing that the Bible is not is a scientific treatise. This fact about the nature of scripture is recognized by the overwhelming majority of Christians and Jews who, as a result, find no conflict between religious truth and scientific truth and thus find no need to lie about scientific truth.

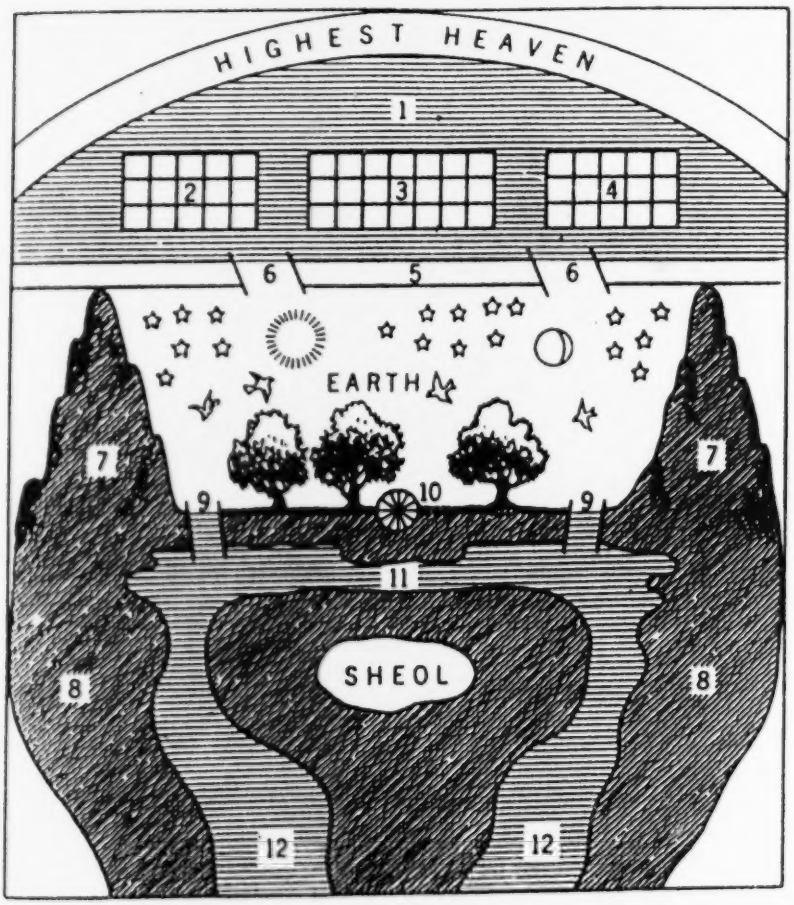
There are, however, a number of fringe group Protestant sects who do not accept this truth about the nature of scripture. In the mid-Nineteenth Century--just over 100 years ago--there arose in this country a liberalizing

movement that claimed the right of every person to read and interpret scripture for her/himself. Difficulties arose when people began to come up with different interpretations, as they should. Because these groups subscribed to the concept of inerrancy which means belief that the Bible is free of error or mistake, they insisted that there could be only one right interpretation and that all others were wrong. To satisfy this demand they hit on the idea of literalism, the idea that the words of the Bible as translated into English by King James' scholars were to be interpreted by their literal meaning. Goodbye myth, allegory, poetry, metaphor, and simile because to accept the existence of such material in the Bible would undermine a religious faith built on literalism. In the context of evolution this perceived problem is clearly stated by Duane Gish:

> The acceptance of the theory of evolution has promoted apostasy because it has caused a radical change in the view of Scripture. If the theory of evolution is accepted, then it must be conceded that the Bible contains myths and legends. . . . This logical chain of events in the interpretation of Scripture culminates in the abandonment of the blood atonement of Christ. There remains no Christian gospel.[11]

Of course Gish in this statement fails to recognize that it is his literalism that constitutes "a radical change in the view of Scripture." The statement does, however, help us to understand the justification used by the "creation scientists" for their monumental mendacity. All is justified in the good cause of defeating evil for as Henry Morris observed, "The theory of evolution is, if rightly understood, nothing but 'bad news,' a delusion of Satan."[12]

The only problem with this bright new idea of Biblical literalism is that it is absolutely wrong as both Biblical scholarship and our own common sense tells us. Not only does this approach strip scripture of much of its meaning and significance, but also it produces nonsense such as "creation science." For example, if we read the Bible as a literal scientific description of our world, what does that world look like?



Biblical conception of the world: (1) waters above the firmament; (2) storehouses of snows; (3) storehouses for hail; (4) chambers of winds; (5) firmament; (6) sluice; (7) pillars of the sky; (8) pillars of the earth; (9) fountain of the deep; (10) navel of the earth; (11) waters under the earth; (12) rivers of the nether world. 13

Perhaps you say that this view must be a joke. It is, and not a very funny one. This illustration demonstrates the nonsense of Biblical literalism that some religious fringe groups are demanding should be taught in the science classroom. Biblical literalism demands that we accept as true a flat earth in a geocentric universe. If read literally, the Bible cannot be without error.

B

Let me turn now to the specific issue at hand--the creation stories. There are in the Old Testament a number of creation myths, but there are only two features common to all of them. First, in every case the <u>one</u> God is recognized as the creator of everything. Second, God's basic act of creation is bringing order out of chaos through the division and control of the waters of the abyss and the formation of land. Both of these claims are particularly significant for the Jews. In the midst of a polytheistic world they assert that there is one God, not many. Because they were land dwellers rather than seafarers, we can assume that bringing order, dividing the waters and creating the dry land was a particularly significant act.

Let me now turn my attention to the special problem of the creation myths of Genesis I and II. The first thing that the careful reader realizes is that these two creation stories do not agree. Both cannot be literally true although the mental gymnastics called "harmonizing" used by literalists to make them seem consistent are truly remarkable. We should not be surprised that these two myths do not match since they were written by different people at different times in response to very different religious concerns.

The oldest creation myth in the Bible is that found in Genesis 2. This story is the work of a writer usually referred to as the Yawist because that is the name he uses for God throughout his narratives. The writing is at least as early as the time of Solomon's kingdom during the 10th century B.C. Richard Friedman drawing together the best contemporary research on the question concludes that the internal evidence of Genesis 2 through 6 indicates that the writer was a Judean Aaronid priest perhaps attached to Solomon's court.[14] This writer was setting down existing mythic explanations of the universe but giving them a very specifically Hebrew theological twist. His dependence on the body of pre-existing Middle Eastern myth is probably nowhere better illustrated than in the remarkable similarity between his flood story in Genesis 6 through 8 to the much earlier Gilgamesh epic.[15] At the time of this writing Israel had become the major military and commercial power in the area with Jerusalem the highly urbanized seat of this power. In his narratives the Yawist proclaims that there is one God who is the creator and constructs a creation myth to convey that proclamation in a way that would communicate meaningfully to the people of his time. A striking feature of these narratives is their pastoral imagery which recalls the nomadic traditions of the people of Israel. The society of Solomon's time seemed to have turned its back on these traditions. The Yawist recalls that earlier, closer relationship with God in his stories of the Garden of Eden with Adam and Eve as its caretakers and that of Abel the faithful shepherd. Even today we can respond to these stories of simple faith by people who are so different from us. It can be said that the Yawist writes "without error" when he communicates across some 3000 years to tell us how his people experienced and understood their relationship with that "unspeakable" they called Yaweh. To claim that the theological work of this Aaronid priest is either

science or history is really nothing less than a blasphemous destruction of the full meaning of this rich work.

Genesis 1, the second major creation myth, is the work of a source scholars refer to as the Priestly Source who appears to have written just prior to the Babylonian exile which came in 587 B.C. Writing some 400 years after the Yawist, this later Aaronid priest wrote to "correct" the earlier work with which he was clearly familiar. He obviously found the theology of a personal God who appeared to and talked with human beings not sufficiently "divine." The God of the Priestly Source is far more austere and remote. Like the Yawist, the Priestly Source demythologizes nature by claiming that there is only one God creator.

The structure of Genesis 1 with its six day ordered sequence of creation is also borrowed from earlier Babylonian myth.[16] The parallel is so close and striking that some Bible scholars (Conrad Hyers is a good example) use it as evidence that the Priestly Source must have written during rather than before the Babylonian exile.[17] The Priestly Source uses this borrowed material to provide a structure for the God of his theology to bring order out of chaos and create the universe. That the Priestly Source wrote well is clear in that this majestic story of the one God who creates everything out of nothing still moves responsive readers. The story is not, however, a scientific treatise and was never meant to be. The order of creation is clearly wrong on the basis of scientific fact. Once again the literalist attempt to reduce this magnificent story to a scientific document can be viewed as blasphemy.

III

This consideration of both the nature of scripture and "creation science" provides a foundation for dealing with the apparent inconsistency of supporting both freedom of expression and the decision of the courts finding the Louisiana (and Arkansas) equal time law unconstitutional. While the stated purpose of the legislation was to promote academic freedom by offering a greater diversity of views and information, the reality behind the legislation was quite different.

The problems begin with the introduction in the Nineteenth Century of the novelty of a literalist reading of the Bible. This approach to scripture is clearly a topic for debate although many of those who subscribe to literalism have sought to suppress the questioning of that belief wherever possible.[18] Since, as has been shown here, Biblical literalism is indefensible nonsense, the effort to suppress criticism is understandable. For adherents to this position any open consideration of an alternative view of scripture would undermine and apparently destroy an entire religious belief system as the statements of Duane Gish and Henry Morris make clear.

"Creation science" has arisen as a part of the defense of a literalist interpretation of the Bible in general and Genesis 1 in particular. Unlike philosophy or theology, science provides a method of inquiry that can lead to conclusions that are demonstrably true or false. "Creation science" rejects the accepted method of scientific inquiry and offers explanations that are not just demonstrably false but apparently known to be false by their proponents. They lie because they perceive the religious belief stakes to be so high.

On the other hand over a century of systematic scientific inquiry has proven that the concepts of evolution in general and speciation in particular

are true. Evolution has been found to be the basic organizing principle of the biological sciences and as such needs to be at the center of the biology curriculum at whatever level it is taught. The equal time concept is nothing more than an attempt to suppress the teaching of evolution or at least that a sectarian religious dogma also be taught. Some people believe in astrology or a geocentric universe, but no one would seriously demand that these be given equal time in an astronomy course. In science things can be right or wrong, not simply matters of opinion, and "creation science" is wrong. Freedom of expression is not threatened when the demonstrably wrong answers are excluded from the science classroom. The academic freedom and equal time claims of "creation science" are as fraudulent as "creation science" itself.

NOTES

1. 107 S. Ct. 2573 (June 19, 1987).

2. Duane Gish, Evolution--the Fossils Say No! (San Diego: Institute for Creation Research, 1979). See also The Fossil Record (videotape) (Mesa, Arizona: Films for Christ Association, n.d.).

3. George S. Bakken, "Creation or Evolution?", Creation/Evolution Newsletter, VII, #6 (November/December 1987), 16-17.

4. Luther D. Sunderland, Darwin's Enigma: The Fossil Record (San Diego: Master Books, 1984.

5. John C. Whitcomb and Henry M. Morris, The Genesis Flood: The Biblical Record and Its Scientific Implications (Phillipsburg, New Jersey: Presbyterian and Reformed, 1961).

6. Henry M. Morris, The Remarkable Birth of Planet Earth (San Diego: Institute for Creation Research,), p. 94.

7. Duane Gish, "The Creation Science Model," Acts and Facts, December 1978.

8. McLean v. Arkansas Board of Education, 529 F. Supp. 1255 (ED Ark. 1982).

9. Kenneth Burke, The Rhetoric of Religion (Boston: Beacon Press, 1961).

10. See also Conrad Hyers, The Meaning of Creation (Atlanta: John Knox Press, 1984), Chapters 1 and 5.

11. Duane Gish, Evidence Against Evolution (Weaton, IL: Tyndale House Publishers, 1972), pp. 19-20.

12. Henry M. Morris, Evolution and the Modern Christian (Grand Rapids: Baker Book House, 1978), p. 68.

13. R.M. Frye, ed., Is God a Creationist? The Religious Case Against Creation-Science (New York: Charles Scribner, 1983).

14. Richard Elliott Friedman, Who Wrote the Bible? (New York: Summit Books, 1987), Chapters 1 and 2.

15. Alan Millard, Treasurers from Bible Times (Belleville, MI: Lion Publishing Corp., 1985), p. 42-43.

16. Hermann Gunkel, "The Influence of Babylonian Mythology Upon the Biblical Creation Story," Creation in the Old Testament, Berhard W. Anderson, ed. (Philadelphia: Fortress Press, 1984), pp. 25-52.

17. Hyers, Chapter 3.

18. Note for example the efforts of the conservative wing of the Southern Baptist Church to remove any teacher who does not subscribe to literal inerrancy (The New York Times, Nov. 11, 1987, p. A18) or the attack on three professors at Calvin College by members of the Christian Reformed Church for suggesting that Genesis 1 is not literally true (The Detroit News, Feb. 13, 1988).